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(11)

**EP 1 074 697 A3**

(12)

## EUROPEAN PATENT APPLICATION

(88) Date of publication A3:  
18.06.2003 Bulletin 2003/25

(51) Int Cl.7: **F01D 9/04, F15D 1/12,  
F01D 5/14, F01D 9/02**

(43) Date of publication A2:  
07.02.2001 Bulletin 2001/06

(21) Application number: **00306649.5**

(22) Date of filing: **04.08.2000**

(84) Designated Contracting States:  
**AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU  
MC NL PT SE**  
Designated Extension States:  
**AL LT LV MK RO SI**

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(30) Priority: **05.08.1999 US 147282 P  
21.12.1999 US 468751**

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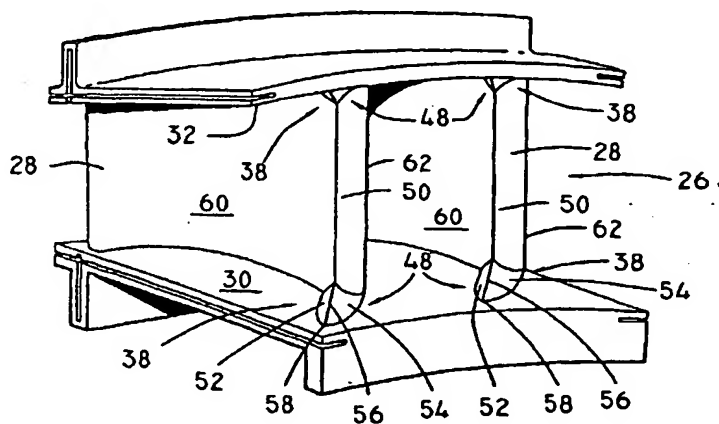
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### (54) **Apparatus and method for stabilizing the core gas flow in a gas turbine engine**

(57) A method for inhibiting radial transfer of core gas flow away from a center radial region and toward the inner and outer radial boundaries of a core gas flow path within a gas turbine engine is provided that includes the steps of: providing a flow directing structure that includes an airfoil 28 that abuts a wall surface 30, 32, said airfoil having a leading edge 50, a pressure side 52, and a suction side 54; and increasing the velocity of the core

gas flow in the area where the leading edge of the airfoil abuts the wall. Increasing the velocity of the core gas flow in the area where the leading edge 50 of the airfoil 28 abuts the wall 30, 32 impedes the formation of a pressure gradient along the surface of the airfoil that forces core gas from the center region of the core gas toward the wall. The method can be achieved by use of a fillet 48 which diverts the core gas flow away from the area where the airfoil 28 abuts the wall 30, 32.

**FIG.2**





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# EUROPEAN SEARCH REPORT

Application Number  
EP 00 30 6649

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The present search report has been drawn up for all claims			
Place of search <b>MUNICH</b>		Date of completion of the search <b>29 April 2003</b>	Examiner <b>Chatziapostolou, A</b>
<p><b>CATEGORY OF CITED DOCUMENTS</b></p> <p>X : particularly relevant if taken alone  Y : particularly relevant if combined with another document of the same category  A : technological background  O : non-written disclosure  P : intermediate document</p> <p>T : theory or principle underlying the invention  E : earlier patent document, but published on, or after the filing date  D : document cited in the application  L : document cited for other reasons  &amp; : member of the same patent family, corresponding document</p>			

EPO FORM 1503 03.02 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT  
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